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EXAMINER
ZMURKO, M

22M1

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ART UNIT	PAPER NUMBER
2203	18

DATE MAILED: 05/19/93

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☒ Responsive to communication filed on 5/10/93 ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), ____ days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. ☒ Notice of References Cited by Examiner, PTO-892.
2. ☒ Notice re Patent Drawing, PTO-948.
3. ☐ Notice of Art Cited by Applicant, PTO-1449.
4. ☐ Notice of Informal Patent Application, Form PTO-152.
5. ☐ Information on How to Effect Drawing Changes, PTO-1474.
6. ☐ _____

Part II SUMMARY OF ACTION

1. ☒ Claims 1-45 are pending in the application.
   Of the above, claims 13-24, 27-28, & 37-45 are withdrawn from consideration.
2. ☐ Claims _____ have been cancelled.
3. ☐ Claims _____ are allowed.
4. ☒ Claims 1-12, 25-26, & 29-36 are rejected.
5. ☐ Claims _____ are objected to.
6. ☐ Claims _____ are subject to restriction or election requirement.
7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.
8. ☐ Formal drawings are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable. ☐ not acceptable (see explanation or Notice re Patent Drawing, PTO-948).
10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____ has (have) been ☐ approved by the examiner. ☐ disapproved by the examiner (see explanation).
11. ☐ The proposed drawing correction, filed on _____, has been ☐ approved. ☐ disapproved (see explanation).
12. ☐ Acknowledgment is made of the claim for priority under U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. _____; filed on _____.
13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other

EXAMINER'S ACTION

Applicants amendments and arguments received on May 10, 1993, have overcome the 35 USC 102 and 103 rejections over Nuemeyer et al made in the previous office action.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

> "A person shall be entitled to a patent unless -
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent."

The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this Office action:

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
>
> Subject matter developed by another person, which qualifies as prior art only under subsection (f) and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Claims 1-12 and 25-26 are rejected under 35 U.S.C. § 102 (e) as being anticipated by Carroll et al.

Carroll et al. teach that tropane derivatives may be employed for imaging and other brain scanning techniques that allow the determination of the presence of cocaine receptors, such as neurotransmitters. In column 1, lines 16-30, Carroll et al. state, "...

attempts to understand, diagnose, treat and prevent neural disorders rely, in part, on localization or imaging techniques, allowing researchers to determine the location, number, and size of specific neurological phenomena. Among those sites undergoing specific testing are cocaine receptors and dopamine transporter sites ... the compound must have a high affinity for the receptor in question ..." Carroll et al. continue by providing [H-3]WIN 35,428 as an example. Carroll et al. continue in column 2, by providing a family of compounds which have demonstrated a high affinity for binding to cocaine receptors, such as the dopamine transporters. Carroll et al. further teach the radiolabeling of these compounds with an iodo substituent.

Claims 29-36 are rejected under 35 U.S.C. 103 as being unpatentable over Carroll et al., as mentioned above, in view of Nosco, and in further view of Wilbur et al.

Neither teaching specifically teaches a kit for preparation of the iodinated neuroprobe. The use of kits is widely acknowledged in the art of radiolabelling. As stated in the previous office action, Nosco teaches in column 2, lines 17-25, "... short half-life of radionuclides it is often nearly impossible to deliver the ready-to-use labelled product to the user. In such cases it is desirable to place the various reaction components at the user's disposal in a so-called kit. By means of the kit, the user himself can carry out the labelling reaction with the radionuclide in the clinical hospital ..." Wilbur et al. provide radiopharmaceutical kits for clinical use for diagnostic and therapeutic applications. Wilbur et al. teach the radiolabeling of the compounds with iodine or fluorine. Furthermore, Wilbur et al. state in column 7, lines 55-62, teach the use of oxidizing agents to treat the derivatized proteins to help the binding of the radiohalogenated molecule to the glycoprotein. To a person of ordinary skill in the art it is clearly advantageous and obvious to use a kit when utilizing the radiolabelled compounds taught by Carroll et al.

Applicant's arguments received on May 10, 1993, have been fully considered but they are not deemed to be persuasive.

Applicants argue that Carroll et al. do not claim a monofluoroalkyl group including F-18 or F-19 at the R position. Examiner directs applicants to applicants claim number one wherein applicants claim "... $^{m}C_nH_{2n+1}$ group where n=1-6 and where m=11 or 14 for at least one ^{m}C." Thus, a fluorine atom does not have to be found on the claimed compound. Furthermore, it is inherent that within a specific amount of carbon atoms that there is a given percentage of C-11 or 14 isotopes. The other arguments presented by applicants in regards to the Nosco and Jacobson et al. patents are addressed in the new rejections stated above.

An inquiry concerning this communication should be directed to Matthew Zmurko at telephone number (703) 308-3957.

Robert L. Stoll

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ART UNIT 223